SEQUENCE LISTING

<110> ORSER, Cindy
GROSSET, Anne
DAVIDSON, Eugene A.

<120> DETECTION OF CONFORMATIONALLY ALTERED PROTEINS AND PRIONS

<130> A28-011

<140> 10/728,246
<141> 2003-12-04

<150> 10/161,061
<151> 2002-05-30

<150> 60/295,456
<151> 2001-05-31

<160> 29

<210> 1
<211> 33
<212> PRT
<213> Homo sapiens

<220>

<400> 1
Val Val Ala Gly Ala Ala Ala Ala Gly Ala Met His Lys Met Asn
1 5 10 15
Thr Lys Pro Lys Met Lys His Met Ala Gly Ala Ala Ala Ala Gly
20 25 30
Ala Val Val

<210> 2
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<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 2
Lys Pro Lys Thr Asn Leu Lys His Val Ala Gly Ala Ala Ala Ala
1 5 10 15
Gly Ala Val Val

<210> 3
<211> 14
<212> PRT
<213> Artificial Sequence

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<223> Synthetic Peptide

<400> 3
Leu Lys His Val Ala Gly Ala Ala Ala Ala Gly Ala Val Val
1 5 10

<210> 4
<211> 40
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 4
Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln
1 5 10 15
Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala
20 25 30
Ile Ile Gly Leu Met Val Gly Gly Val Val
35 40

<210> 5
<211> 24
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 5
Glu Val His His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly
1 5 10 15
Ser Asn Lys Gly Ala Ile Ile Gly Leu
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<210> 6
<211> 24
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 6
Glu Val Arg His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly
1 5 10 15
Ser Asn Lys Gly Ala Ile Ile Gly Leu
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<210> 7
<211> 11
<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 7
Gly Ser Asn Lys Gly Ala Ile Ile Gly Leu Met
1 5 10

<210> 8
<211> 28
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 8
Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys
1 5 10 15
Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys
20 25

<210> 9
<211> 23
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 9
Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln
1 5 10 15
Gln Gln Gln Gln Gln Gln Gln Gln Gln
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<210> 10
<211> 19
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 10
Lys Pro Lys Thr Asn Leu Lys His Val Ala Gly Ala Ala Ala Ala
1 5 10 15
Gly Ala Val Val

<210> 11
<211> 38
<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 11
Met Gly Ile Leu Lys Leu Gln Val Phe Leu Ile Val Leu Ser Val
1 5 10 15
Ala Leu Asn His Leu Lys Ala Thr Pro Ile Glu Ser His Gln Val
20 25 30
Glu Lys Arg Lys Cys Asn Thr Ala
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<210> 12
<211> 25
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 12
Met Ala Glu Ser His Leu Leu Gln Trp Leu Leu Leu Leu Leu Pro
1 5 10 15
Thr Leu Cys Gly Pro Gly Thr Ala Ala Trp
20 25

<210> 13
<211> 253
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 13
Met Ala Asn Leu Gly Cys Trp Met Leu Val Leu Phe Val Ala Thr
1 5 10 15
Trp Ser Asp Leu Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly
20 25 30
Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly
35 40 45
Gly Asn Arg Tyr Pro Pro Gly Gly Gly Gly Gly Trp Gly Gln Pro
50 55 60
His Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln
65 70 75
Pro His Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly
80 85 90
Gly Gly Gly Gly Thr His Ser Gln Trp Asn Lys Pro Ser Lys Pro
95 100 105
Lys Thr Asn Met Lys His Met Ala Gly Ala Ala Ala Ala Gly Ala
110 115 120
Val Val Gly Gly Leu Gly Gly Tyr Met Leu Gly Ser Ala Met Ser
125 130 135
Arg Pro Ile Ile His Phe Gly Ser Asp Tyr Glu Asp Arg Tyr Tyr

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                140                 145                 150
Arg Glu Asn Met His Arg Tyr Pro Asn Gln Val Tyr Tyr Arg Pro
                155                 160                 165
Met Asp Glu Tyr Ser Asn Gln Asn Asn Phe Val His Asp Cys Val
                170                 175                 180
Asn Ile Thr Ile Lys Gln His Thr Val Thr Thr Thr Thr Lys Gly
                185                 190                 195
Glu Asn Phe Thr Glu Thr Asp Val Lys Met Met Glu Arg Val Val
                200                 205                 210
Glu Gln Met Cys Ile Thr Gln Tyr Glu Arg Glu Ser Gln Ala Tyr
                215                 220                 225
Tyr Gln Arg Gly Ser Ser Met Val Leu Phe Ser Ser Pro Pro Val
                230                 235                 240
Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly
                245                 250
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<210> 14
<211> 254
<212> PRT
<213> murine

<220>

<400> 14

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Met Ala Asn Leu Gly Tyr Trp Leu Leu Ala Leu Phe Val Thr Met
  1                 5                  10                  15
Trp Thr Asp Val Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly
                 20                  25                  30
Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly
                 35                  40                  45
Gly Asn Arg Tyr Pro Pro Gln Gly Gly Thr Trp Gly Gln Pro His
                 50                  55                  60
Gly Gly Gly Trp Gly Gln Pro His Gly Gly Ser Trp Gly Gln Pro
                 65                  70                  75
His Gly Gly Ser Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln
                 80                  85                  90
Gly Gly Gly Thr His Asn Gln Trp Asn Lys Pro Ser Lys Pro Lys
                 95                 100                 105
Thr Asn Leu Lys His Val Ala Gly Ala Ala Ala Ala Gly Ala Val
                110                 115                 120
Val Gly Gly Leu Gly Gly Tyr Met Leu Gly Ser Ala Met Ser Arg
                125                 130                 135
Pro Met Ile His Phe Gly Asn Asp Trp Glu Asp Arg Tyr Tyr Arg
                140                 145                 150
Glu Asn Met Tyr Arg Tyr Pro Asn Gln Val Tyr Tyr Arg Pro Val
                155                 160                 165
Asp Gln Tyr Ser Asn Gln Asn Asn Phe Val His Asp Cys Val Asn
                170                 175                 180
Ile Thr Ile Lys Gln His Thr Val Thr Thr Thr Thr Lys Gly Glu
                185                 190                 195
Asn Phe Thr Glu Thr Asp Val Lys Met Met Glu Arg Val Val Glu
                200                 205                 210
Gln Met Cys Val Thr Gln Tyr Gln Lys Glu Ser Gln Ala Tyr Tyr
                215                 220                 225
Asp Gly Arg Arg Ser Ser Ser Thr Val Leu Phe Ser Ser Pro Pro
                230                 235                 240
Val Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly
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245 250

<210> 15
<211> 782
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 15
Met Ala Pro His Arg Pro Ala Pro Ala Leu Leu Cys Ala Leu Ser
1 5 10 15
Leu Ala Leu Cys Ala Leu Ser Leu Pro Val Arg Ala Ala Thr Ala
20 25 30
Ser Arg Gly Ala Ser Gln Ala Gly Ala Pro Gln Gly Arg Val Pro
35 40 45
Glu Ala Arg Pro Asn Ser Met Val Val Glu His Pro Glu Phe Leu
50 55 60
Lys Ala Gly Lys Glu Pro Gly Leu Gln Ile Trp Arg Val Glu Lys
65 70 75
Phe Asp Leu Val Pro Val Pro Thr Asn Leu Tyr Gly Asp Phe Phe
80 85 90
Thr Gly Asp Ala Tyr Val Ile Leu Lys Thr Val Gln Leu Arg Asn
95 100 105
Gly Asn Leu Gln Tyr Asp Leu His Tyr Trp Leu Gly Asn Glu Cys
110 115 120
Ser Gln Asp Glu Ser Gly Ala Ala Ala Ile Phe Thr Val Gln Leu
125 130 135
Asp Asp Tyr Leu Asn Gly Arg Ala Val Gln His Arg Glu Val Gln
140 145 150
Gly Phe Glu Ser Ala Thr Phe Leu Gly Tyr Phe Lys Ser Gly Leu
155 160 165
Lys Tyr Lys Lys Gly Gly Val Ala Ser Gly Phe Lys His Val Val
170 175 180
Pro Asn Glu Val Val Val Gln Arg Leu Phe Gln Val Lys Gly Arg
185 190 195
Arg Val Val Arg Ala Thr Glu Val Pro Val Ser Trp Glu Ser Phe
200 205 210
Asn Asn Gly Asp Cys Phe Ile Leu Asp Leu Gly Asn Asn Ile His
215 220 225
Gln Trp Cys Gly Ser Asn Ser Asn Arg Tyr Glu Arg Leu Lys Ala
230 235 240
Thr Gln Val Ser Lys Gly Ile Arg Asp Asn Glu Arg Ser Gly Arg
245 250 255
Ala Arg Val His Val Ser Glu Glu Gly Thr Glu Pro Glu Ala Met
260 265 270
Leu Gln Val Leu Gly Pro Lys Pro Ala Leu Pro Ala Gly Thr Glu
275 280 285
Asp Thr Ala Lys Glu Asp Ala Ala Asn Arg Lys Leu Ala Lys Leu
290 295 300
Tyr Lys Val Ser Asn Gly Ala Gly Thr Met Ser Val Ser Leu Val
305 310 315
Ala Asp Glu Asn Pro Phe Ala Gln Gly Ala Leu Lys Ser Glu Asp
320 325 330
Cys Phe Ile Leu Asp His Gly Lys Asp Gly Lys Ile Phe Val Trp
335 340 345

```
Lys Gly Lys Gln Ala Asn Thr Glu Glu Arg Lys Ala Ala Leu Lys
                350                 355                 360
Thr Ala Ser Asp Phe Ile Thr Lys Met Asp Tyr Pro Lys Gln Thr
                365                 370                 375
Gln Val Ser Val Leu Pro Glu Gly Gly Glu Thr Pro Leu Phe Lys
                380                 385                 390
Gln Phe Phe Lys Asn Trp Arg Asn Pro Asn Gln Thr Asn Gly Leu
                395                 400                 405
Gly Leu Ser Tyr Leu Ser Ser His Ile Ala Asn Val Glu Arg Val
                410                 415                 420
Pro Phe Asp Ala Ala Thr Leu His Thr Ser Thr Ala Met Ala Ala
                425                 430                 435
Gln His Gly Met Asp Asp Asp Gly Thr Gly Gln Lys Gln Ile Trp
                440                 445                 450
Arg Ile Glu Gly Ser Asn Lys Val Pro Val Asp Pro Ala Thr Tyr
                455                 460                 465
Gly Gln Phe Tyr Gly Gly Asp Ser Tyr Ile Ile Leu Tyr Asn Tyr
                470                 475                 480
Arg His Gly Gly Arg Gln Gly Gln Ile Ile Tyr Asn Trp Gln Gly
                485                 490                 495
Arg Gln Ser Thr Gln Asp Glu Val Ala Ala Ser Ala Ile Leu Thr
                500                 505                 510
Ala Gln Leu Asp Glu Glu Leu Gln Gln Thr Pro Val Gln Ser Arg
                515                 520                 525
Val Val Gln Gly Lys Glu Pro Ala His Leu Met Ser Leu Phe Gly
                530                 535                 540
Gly Lys Pro Met Ile Ile Tyr Lys Gly Gly Thr Ser Arg Glu Gly
                545                 550                 555
Gly Gln Thr Ala Pro Ala Ser Thr Arg Leu Phe Gln Val Arg Ala
                560                 565                 570
Asn Ser Ala Gly Ala Thr Arg Ala Val Glu Val Leu Pro Lys Ala
                575                 580                 585
Gly Ala Leu Asn Ser Asn Asp Ala Phe Val Leu Lys Thr Pro Ser
                590                 595                 600
Ala Ala Tyr Leu Trp Val Gly Thr Gly Ala Ser Glu Ala Glu Lys
                605                 610                 615
Thr Gly Ala Gln Glu Leu Leu Arg Val Leu Arg Ala Gln Pro Val
                620                 625                 630
Gln Val Ala Glu Gly Ser Glu Pro Asp Gly Phe Trp Glu Ala Leu
                635                 640                 645
Gly Gly Lys Ala Ala Tyr Arg Thr Ser Pro Arg Leu Lys Asp Lys
                650                 655                 660
Lys Met Asp Ala His Pro Pro Arg Leu Phe Ala Cys Ser Asn Lys
                665                 670                 675
Ile Gly Arg Phe Val Ile Glu Glu Val Pro Gly Glu Leu Met Gln
                680                 685                 690
Glu Asp Leu Ala Thr Asp Asp Val Met Leu Leu Asp Thr Trp Asp
                695                 700                 705
Gln Val Phe Val Trp Val Gly Lys Asp Ser Gln Glu Glu Glu Lys
                710                 715                 720
Thr Glu Ala Leu Thr Ser Ala Lys Arg Tyr Ile Glu Thr Asp Pro
                725                 730                 735
Ala Asn Arg Asp Arg Arg Thr Pro Ile Thr Val Val Lys Gln Gly
                740                 745                 750
Phe Glu Pro Pro Ser Phe Val Gly Trp Phe Leu Gly Trp Asp Asp
                755                 760                 765
Asp Tyr Trp Ser Val Asp Pro Leu Asp Arg Ala Met Ala Glu Leu
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770 775 780
Ala Ala

<210> 16
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 16
Tyr Glu Arg Leu Lys Ala Thr Gln Val Ser Lys Gly Ile Arg Asp
1 5 10 15
Asn Glu Arg Ser Gly Arg Ala Arg Val His Val Ser Glu Glu Gly
20 25 30
Thr Glu Pro Glu Ala Met
35

<210> 17
<211> 146
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 17
Met Ala Gly Pro Leu Arg Ala Pro Leu Leu Leu Leu Ala Ile Leu
1 5 10 15
Ala Val Ala Leu Ala Val Ser Pro Ala Ala Gly Ser Ser Pro Gly
20 25 30
Lys Pro Pro Arg Leu Val Gly Gly Pro Met Asp Ala Ser Val Glu
35 40 45
Glu Glu Gly Val Arg Arg Ala Leu Asp Phe Ala Val Gly Glu Tyr
50 55 60
Asn Lys Ala Ser Asn Asp Met Tyr His Ser Arg Ala Leu Gln Val
65 70 75
Val Arg Ala Arg Lys Gln Ile Val Ala Gly Val Asn Tyr Phe Leu
80 85 90
Asp Val Glu Leu Gly Arg Thr Thr Cys Thr Lys Thr Gln Pro Asn
95 100 105
Leu Asp Asn Cys Pro Phe His Asp Gln Pro His Leu Lys Arg Lys
110 115 120
Ala Phe Cys Ser Phe Gln Ile Tyr Ala Val Pro Trp Gln Gly Thr
125 130 135
Met Thr Leu Ser Lys Ser Thr Cys Gln Asp Ala
140 145

<210> 18
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 18
Glu Glu Glu Val Ser Ala Asp Met Pro Pro Pro Pro Met Asp Ala
1 5 10 15
Ser Val Glu Glu Glu
20

<210> 19
<211> 315
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 19
Met Ala Thr Leu Glu Lys Leu Met Lys Ala Phe Glu Ser Leu Lys
1 5 10 15
Ser Phe Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln
20 25 30
Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Pro Pro Pro Pro Pro
35 40 45
Pro Pro Pro Pro Pro Pro Gln Leu Pro Gln Pro Pro Pro Gln Ala
50 55 60
Gln Pro Leu Leu Pro Gln Pro Gln Pro Pro Pro Pro Pro Pro Pro
65 70 75
Pro Pro Pro Gly Pro Ala Val Ala Glu Glu Pro Leu His Arg Pro
80 85 90
Lys Lys Glu Leu Ser Ala Thr Lys Lys Asp Arg Val Asn His Cys
95 100 105
Leu Thr Ile Cys Glu Asn Ile Val Ala Gln Ser Val Arg Asn Ser
110 115 120
Pro Glu Phe Gln Lys Leu Leu Gly Ile Ala Met Glu Leu Phe Leu
125 130 135
Leu Cys Ser Asp Asp Ala Glu Ser Asp Val Arg Met Val Ala Asp
140 145 150
Glu Cys Leu Asn Lys Val Ile Lys Ala Leu Met Asp Ser Asn Leu
155 160 165
Pro Arg Leu Gln Leu Glu Leu Tyr Lys Glu Ile Lys Lys Asn Gly
170 175 180
Ala Pro Arg Ser Leu Arg Ala Ala Leu Trp Arg Phe Ala Glu Leu
185 190 195
Ala His Leu Val Arg Pro Gln Lys Cys Arg Pro Tyr Leu Val Asn
200 205 210
Leu Leu Pro Cys Leu Thr Arg Thr Ser Lys Arg Pro Glu Glu Ser
215 220 225
Val Gln Glu Thr Leu Ala Ala Ala Val Pro Lys Ile Met Ala Ser
230 235 240
Phe Gly Asn Phe Ala Asn Asp Asn Glu Ile Lys Val Leu Leu Lys
245 250 255
Ala Phe Ile Ala Asn Leu Lys Ser Ser Ser Pro Thr Ile Arg Arg
260 265 270
Thr Ala Ala Gly Ser Ala Val Ser Ile Cys Gln His Ser Arg Arg
275 280 285
Thr Gln Tyr Phe Tyr Ser Trp Leu Leu Asn Val Leu Leu Gly Leu
290 295 300
Leu Val Pro Val Glu Asp Glu His Ser Thr Leu Leu Ile Leu Gly
305 310 315

<210> 20
<211> 17
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 20
Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln
1 5 10 15
Gln Gln

<210> 21
<211> 89
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 21
Met Gly Ile Leu Lys Leu Gln Val Phe Leu Ile Val Leu Ser Val
1 5 10 15
Ala Leu Asn His Leu Lys Ala Thr Pro Ile Glu Ser His Gln Val
20 25 30
Glu Lys Arg Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu
35 40 45
Ala Asn Phe Leu Val His Ser Ser Asn Asn Phe Gly Ala Ile Leu
50 55 60
Ser Ser Thr Asn Val Gly Ser Asn Thr Tyr Gly Lys Arg Asn Ala
65 70 75
Val Glu Val Leu Lys Arg Glu Pro Leu Asn Tyr Leu Pro Leu
80 85

<210> 22
<211> 5
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 22
Leu Ala Asn Phe Val
1 5

<210> 23
<211> 14
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 23
Val Phe Asn Ala Leu Pro Pro Pro Pro Leu Ala Asn Phe Val
1 5 10

<210> 24
<211> 6
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 24
Phe Leu Val His Ser Ser
1 5

<210> 25
<211> 15
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 25
Ser Ser His Val Leu Phe Pro Pro Pro Phe Leu Val His Ser Ser
1 5 10 15

<210> 26
<211> 147
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 26
Met Ala Ser His Arg Leu Leu Leu Leu Cys Leu Ala Gly Leu Val
1 5 10 15
Phe Val Ser Glu Ala Gly Pro Thr Gly Thr Gly Glu Ser Lys Cys
20 25 30
Pro Leu Met Val Lys Val Leu Asp Ala Val Arg Gly Ser Pro Ala
35 40 45
Ile Asn Val Ala Val His Val Phe Arg Lys Ala Ala Asp Asp Thr
50 55 60
Trp Glu Pro Phe Ala Ser Gly Lys Thr Ser Glu Ser Gly Glu Leu
65 70 75
His Gly Leu Thr Thr Glu Glu Glu Phe Val Glu Gly Ile Tyr Lys

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                  80                  85                  90
Val Glu Ile Asp Thr Lys Ser Tyr Trp Lys Ala Leu Gly Ile Ser
                  95                 100                 105
Pro Phe His Glu His Ala Glu Val Val Phe Thr Ala Asn Asp Ser
                 110                 115                 120
Gly Pro Arg Arg Tyr Thr Ile Ala Ala Leu Leu Ser Pro Tyr Ser
                 125                 130                 135
Tyr Ser Thr Thr Ala Val Val Thr Asn Pro Lys Glu
                140                 145
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<210> 27
<211> 22
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 27

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Glu Ser Val Phe Val Leu Gly Ala Leu Pro Pro Pro Pro Leu Ala
  1               5                  10                  15
Gly Leu Val Phe Val Ser Glu
                  20
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<210> 28
<211> 32
<212> PRT
<213> Artificial Sequence

<220>

<221> unsure
<222> (8) (25)
<223> Synthetic Peptide

<400> 28

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Val Ala Ala Ala Lys Leu Arg Xaa Val Val Thr Ser Arg Gln Pro
  1               5                  10                  15
Pro Pro Pro Gln Arg Ser Thr Val Val Xaa Arg Leu Lys Ala Ala
                  20                  25                  30
Ala Val
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<210> 29
<211> 33
<212> PRT
<213> murine

<220>

<400> 29

```
Val Val Ala Gly Ala Ala Ala Ala Gly Ala Val His Lys Leu Asn
  1               5                  10                  15
Thr Lys Pro Lys Leu Lys His Val Ala Gly Ala Ala Ala Ala Gly
                  20                  25                  30
Ala Val Val
```